REMARKS

This is a full response to the outstanding non-final Office Action mailed June 18, 2002. Claims 1, 4-10, and 13-17 are preliminarily rejected under 35 USC 102(b) as being anticipated by prior art. Claims 2-3 and 11-12 are preliminarily rejected under 35 USC 103(a) as being unpatentable over prior art in view of US Patent No. 4,241,271 to Johnson, *et al* (hereinafter referred to as "Johnson"). Claims 18-23 have been withdrawn by the Examiner as directed toward non-elected claims.

I. Response to Claim Rejections based on Anticipation

In the Office Action, Claim 1 is preliminarily rejected under 35 USC 102(b) as being anticipated by prior art. For a proper rejection of a claim under 35 USC§102(b), the cited reference must disclose all elements/features/steps of the claim. See, *e.g.*, E.I. du Pont de Nemours & Co. v. Phillips Petroleum Co., 849 F.2d 1430, 7 USPQ2d 1129 (Fed. Cir. 1988).

A. Claim 1

Claim 1 is presently written as:

> 1. A compression journal comprising:
> at least two circularly shaped segments;
> a cylindrical shaft having said circularly shaped segments positioned around said shaft;
> ***at least one air gap positioned circumferentially between the two circularly shaped segments;*** and
> means, positioned around the outside of said segments, for maintaining electrical contact between said segments and said cylindrical shaft.
> ***(Emphasis added).***

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FIG. 1 and FIG. 2 illustrate a prior art traditional journal 10, as discussed both in the background and in an early portion of the detailed description. As shown, the sleeve 18 operates as a rotor 16/stator 14 interface. One of the problems with the design shown, and as discussed in the background, is the constant radial movement of the rotor 16, with respect to the stator 14, generates friction between the parts and quickly wears down the traditional journal 10. As, for instance, the sleeve 18 becomes worn down, its electrical contact between the stator 14 and the rotor 16 is worn and its ability to operate as an efficient interface between the two parts becomes limited.

The present invention, as claimed in claim 1, overcomes this defect of the prior art. As shown in FIG. 4, the ring segments 20A, 20B operate as at least part of an alternative to the stator 14 shown in FIG. 1. As the sleeve 44 of FIG. 4 rotates with the shaft 46 and against the ring segments 20A, 20B, wear will develop between the ring segments 20A, 20B and the sleeve 44. However, the physical connection between the ring segments 20A, 20B and the sleeve 44 is not diminished because the O-ring 24 (the "means, positioned around the outside of said segments, for maintaining electrical contact between said segments and said cylindrical shaft" of claim 1) presses the ring segments 20A, 20B radially inward to maintain that electrical contact.

The air gap 21 is necessary because if the ring segments 20A, 20B abut, are joined, or are otherwise physically adjacent circumferentially across the entire perimeter of the sleeve 44, the contact between the ring segments 20A, 20B would inhibit the O-ring 24 from radially pressing the ring segments 20A, 20B against the

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sleeve 44. Further, the prior art shown in FIG. 1 and FIG. 2 fails to disclose at least one air gap positioned circumferentially between the two circularly shaped segments.

As the prior art shown in FIG. 1 and FIG. 2 fails to disclose all limitations of claim 1, the Applicants respectfully request the Examiner withdraw the preliminary anticipation rejection.

B. Claims 2-7

The Applicants respectfully submit that since claims 2-7 depend on independent claim 1, claims 2-7 contain all limitations of independent claim 1. Since independent claim 1 should be allowed, as argued above, pending dependent claims 2-7 should be allowed as a matter of law for at least this reason. In re Fine, 5 U.S.P.Q. 2d 1596, 1608 (Fed. Cir. 1988).

1. Claims 5 and 6

With regards to claims 5 and 6, and in addition to the arguments presented above, FIG. 1, FIG. 2, and FIG. 10 fail to call out an O-ring used for maintaining electrical contact between ring segments and a cylindrical shaft. FIG. 1 and FIG. 2 only call out a stator assembly 12, a stator 14, a rotor 16, and a sleeve 18. FIG. 10 provides a "non-contacting rotational interface" which teaches against or teaches avoiding maintaining any electrical contact. It is unclear from page 3 of the office action, which element(s) in these figures was thought to be an O-ring.

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As the prior art shown in FIG. 1, FIG. 2, and FIG. 10 fails to disclose all limitations of claims 4 and 5, the Applicants respectfully request the Examiner withdraw the preliminary anticipation rejection.

C. Claim 8

Claim 8 is presently written as:

> 8. A rotary joint comprising:
> a rotor assembly having a housing and a shaft extending outward from a center portion thereof;
> a stator assembly having a cylindrical opening for receiving said shaft of said rotor assembly, the housing of said rotor assembly being secured within a housing of said stator assembly;
> a cavity in said stator assembly for receiving at least two circularly shaped segments positioned around said shaft of said rotor assembly;
> ***at least one air gap positioned circumferentially between the two circularly shaped segments;*** and
> means positioned around the outside of said segments for maintaining electrical contact between said segments and said shaft of said rotor assembly.
> ***(Emphasis added).***

FIG. 1 and FIG. 2 illustrate a prior art traditional journal 10, as discussed both in the background and in an early portion of the detailed description. As shown, the sleeve 18 operates as a rotor 16/stator 14 interface. One of the problems with the design shown, and as discussed in the background, is the constant radial movement of the rotor 16, with respect to the stator 14, generates friction between the parts and quickly wears down the traditional journal 10. As, for instance, the sleeve 18 becomes worn down, its electrical contact between the stator 14 and the rotor 16 is worn and its ability to operate as an efficient interface between the two parts becomes limited.

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The present invention, as claimed in claim 8, overcomes this defect of the prior art. As shown in FIG. 4, the ring segments 20A, 20B operate as at least part of an alternative to the stator 14 shown in FIG. 1. As the sleeve 44 of FIG. 4 rotates with the shaft 46 and against the ring segments 20A, 20B, wear will develop between the ring segments 20A, 20B and the sleeve 44. However, the physical connection between the ring segments 20A, 20B and the sleeve 44 is not diminished because the O-ring 24 (the "means positioned around the outside of said segments for maintaining electrical contact between said segments and said shaft of said rotor assembly" of claim 8) presses the ring segments 20A, 20B radially inward to maintain that electrical contact.

The air gap 21 is necessary because if the ring segments 20A, 20B abut, are joined, or are otherwise physically adjacent circumferentially across the entire perimeter of the sleeve 44, the contact between the ring segments 20A, 20B would inhibit the O-ring 24 from radially pressing the ring segments 20A, 20B against the sleeve 44. Further, the prior art shown in FIG. 1 and FIG. 2 fails to disclose at least one air gap positioned circumferentially between the two circularly shaped segments.

FIG. 10 provides a "non-contacting rotational interface" which teaches against or teaches avoiding maintaining any electrical contact. This design for a rotary joint is an alternative to the design shown in FIG. 1 and FIG. 2, although it does illustrate some of the common elements of a rotary joint. The teaching of FIG. 10 fails to disclose at least two ring segments having at least one air gap positioned circumferentially between the two circularly shaped segments. The teaching of FIG. 10 fails to disclose means positioned around the outside of said segments for

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maintaining electrical contact between said segments and said shaft of said rotor assembly. Again, with regards to these elements, FIG. 10 teaches using the quarter wavelength choke 66 to dampen a signal from the cavity 74 without engaging in electrical contact – completely contrary to the limitations of claim 8.

As the prior art shown in FIG. 1, FIG. 2, and FIG. 10 fails to disclose all limitations of claim 8, the Applicants respectfully request the Examiner withdraw the preliminary anticipation rejection.

D. Claims 9-17

The Applicants respectfully submit that since claims 9-17 depend on independent claim 8, claims 9-17 contain all limitations of independent claim 8. Since independent claim 8 should be allowed, as argued above, pending dependent claims 9-17 should be allowed as a matter of law for at least this reason. In re Fine, 5 U.S.P.Q. 2d 1596, 1608 (Fed. Cir. 1988).

1. Claims 13 and 14

With regards to claims 13 and 14, and in addition to the arguments presented above, FIG. 1, FIG. 2, and FIG. 10 fail to call out an O-ring used for maintaining electrical contact between ring segments and a cylindrical shaft. FIG. 1 and FIG. 2 only call out a stator assembly 12, a stator 14, a rotor 16, and a sleeve 18. FIG. 10 provides a "non-contacting rotational interface" which teaches against or teaches avoiding maintaining any electrical contact. It is unclear from page 3 of the office action, which element(s) in these figures was thought to be an O-ring.

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As the prior art shown in FIG. 1, FIG. 2, and FIG. 10 fails to disclose all limitations of claims 13 and 14, the Applicants respectfully request the Examiner withdraw the preliminary anticipation rejection.

II. Response To Claim Rejections Based On Obviousness

In the Office Action, Claims 2-3 and 11-12 are preliminarily rejected under 35 USC 103(a) as being unpatentable over prior art in view of US Patent No. 4,241,271 to Johnson, *et al* (hereinafter referred to as "Johnson"). It is well established at law that, for a proper rejection of a claim under 35 U.S.C. §103 as being obvious based upon a combination of references, the cited combination of references must disclose, teach, or suggest, either implicitly or explicitly, all elements/features/steps of the claim at issue. See, e.g., In re Dow Chemical, 5 U.S.P.Q. 2d 1529, 1531 (Fed. Cir. 1988), and In re Keller, 208 U.S.P.Q. 871, 881 (C.C.P.A. 1981).

A. Claims 2 and 3

The Applicants respectfully submit that since claims 2 and 3 depend on independent claim 1, claims 2 and 3 contain all limitations of independent claim 1. Since independent claim 1 should be allowed, as argued above, and pending dependent claims 2 and 3 are not rejected based on any references containing matter that would render claim 1 obvious, claims 2 and 3 should be allowed as a matter of law for at least this reason. In re Fine, 5 U.S.P.Q. 2d 1596, 1608 (Fed. Cir. 1988).

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B. Claims 11 and 12

The Applicants respectfully submit that since claims 11 and 12 depend on independent claim 8, claims 11 and 12 contain all limitations of independent claim 8. Since independent claim 8 should be allowed, as argued above, and pending dependent claims 11 and 12 are not rejected based on any references containing matter that would render claim 8 obvious, claims 11 and 12 should be allowed as a matter of law for at least this reason. In re Fine, 5 U.S.P.Q. 2d 1596, 1608 (Fed. Cir. 1988).

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Amendment to the Drawings

Drawing Objection

On page 2 of the office action, a preliminary objection was presented regarding FIG. 10. Specifically, FIG. 10 is prior art, but is not so labeled. FIG. 10 is herein amended to include the label, "PRIOR ART". As the objection has been complied with, the Applicants respectfully request withdrawal of the preliminary objection.

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CONCLUSION

In light of the foregoing amendments and for at least the reasons set forth above, Applicants respectfully submit that all objections and rejections have been traversed, rendered moot and/or accommodated, and that presently pending claims 1-17 are in condition for allowance. Favorable reconsideration and allowance of the present application and the presently pending claims are hereby courteously requested. If in the opinion of the Examiner, a telephonic conference would expedite the examination of this matter, the Examiner is invited to call the undersigned attorney at (603) 668-1400.

Respectfully submitted,

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CERTIFICATE OF MAILING

I hereby certify that this correspondence is being deposited with the United States Postal Service as First Class Mail in an envelope addressed to: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on, November 1, 2005 at Manchester, New Hampshire.

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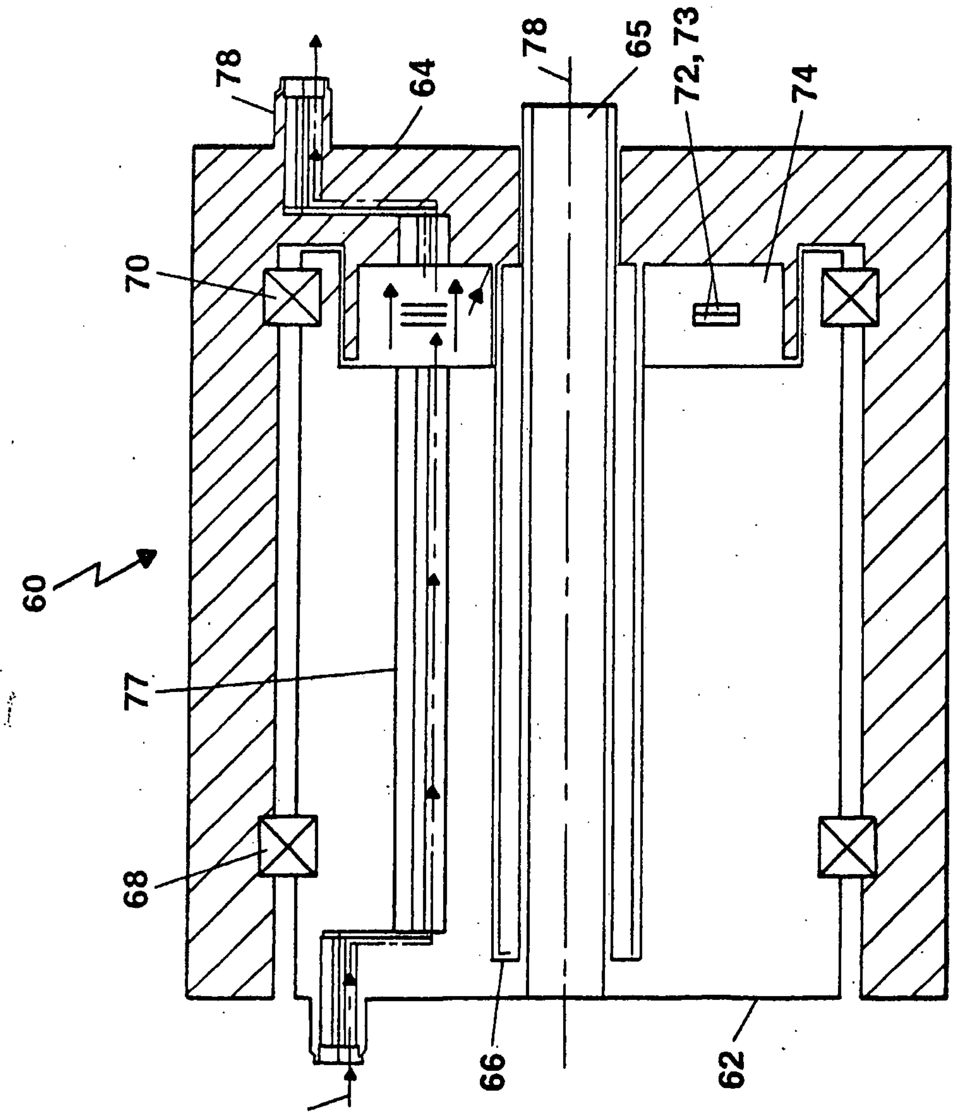

Figure 10
PRIOR ART